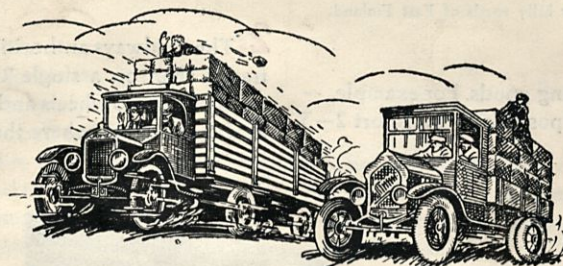


Is it worth while driving Without a Trailer?



HAS IT EVER OCCURED to you that only certain classes of goods can be transported economically on even the best of modern motor trucks? This is due to the fact that most of the goods requiring road transport are so bulky in comparison with their weight that only a small proportion of the carrying capacity of the truck can be utilised.

As an example of the above, the transportation of long stuff, such as planks, timber, steel bars etc. has only been accomplished with the greatest difficulty and by the use of appliances which have been not only clumsy but even dangerous.

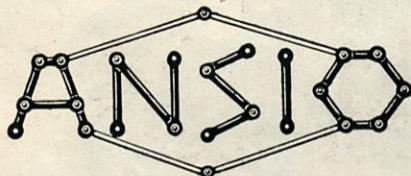
Transport of light materials such as hay, peat, boxes, furniture etc. is expensive as it is impossible to construct a truck body sufficiently roomy to hold more than a fraction of the normal load.

The engines in modern motor trucks are so powerful that the worst hills can be taken with ease even with a full load and it is therefore obvious that on good roads much heavier loads could be transported. This, however, is impossible as the maximum load is fixed by law and depends on the bearing surface of the tyres.

To solve the above problem it is only necessary to fit a properly constructed trailer thereby increasing both the loading space and the number of wheels.

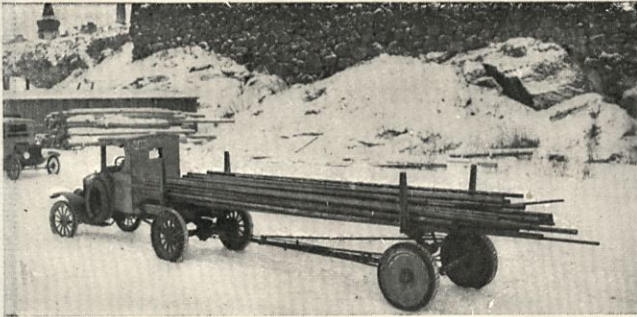
The articulated Trailer

A Finnish Invention



Master Patent.

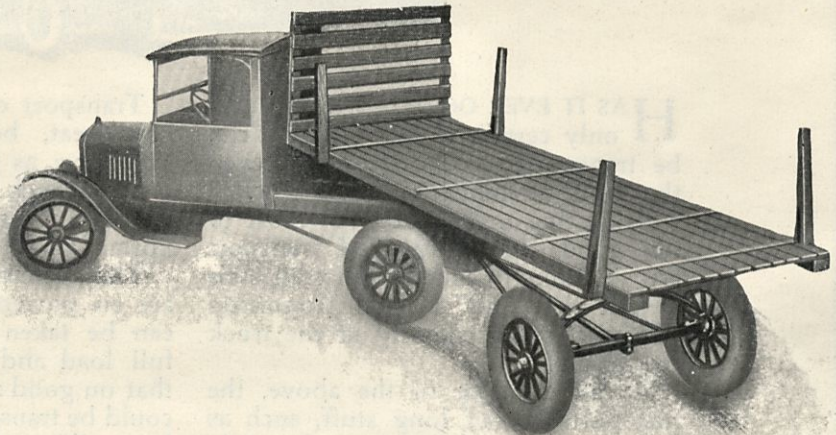
MANUFACTURER **J. HALLENBERG** VIBORG.
TAMMISUO WORKS



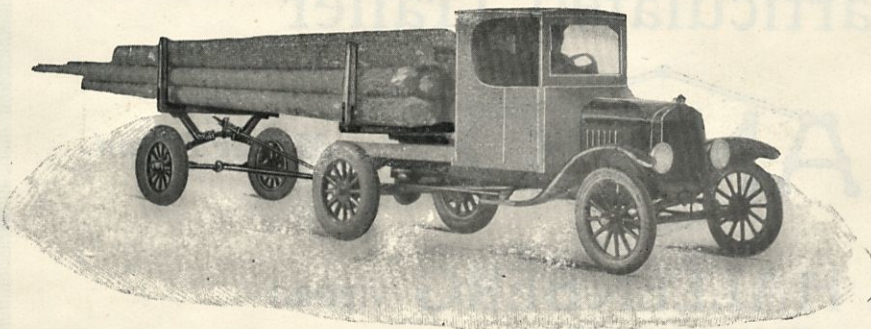
A 3½ ton load of steel tubes on the narrow hilly roads of East Finland.

The advantages of a good Trailer.

1. A full load can be carried even when the goods are light and bulky as the combined loading space of the truck and trailer is sufficiently large. Transport costs per unit weight are therefore appreciably less, and contracts can be taken at a bigger profit.
2. The roadways authorities permit a higher load on a truck with trailer than on a single truck as on the former the load is distributed over 6 wheels and is therefore not so severe on the road as with the latter where the load is carried on only 4 wheels.
3. A truck with trailer can handle long goods. For example, — on a 1½ ton truck with trailer it is possible to transport 2—3 tons of telegraph poles or rails.
4. The superfluous power of the motor can be best used with the help of a trailer for the simple reason that the loading area can be made sufficiently large.
5. On bad roads the tractive power of a truck with trailer is greater than that of a single truck owing to the fact that inequalities on the road surface are passed over in three stages. The pressure per wheel is less so that it is easier for the wheel to pass over a lump or pothole. When the load is distributed evenly over the wheels of the truck and trailer the road shocks are reduced and the load is subjected to less vibration.
6. There is less danger of breaking springs and less wear on the tyres as the road shocks are so much reduced even on bad roads.



Loading platforms can be changed in 5 minutes. In this illustration the swivelling platform is mounted on the chassis.



Economical transport of timber after it has been sledged out of the forest.

7. If the loading platform is sufficiently long the height and breadth of the load can be reduced so that the centre of gravity of the load is lowered and there is less overhang. Consequently there is less danger of skidding and less wear on the tyres.

With less overhang it is possible to make better average speed especially on narrow roads with passing traffic.

8. Loading and unloading is simpler and quicker with a trailer as the load is lower and more easily held in position on bad roads.

Why ANSIO is the best Trailer?

The reason why trailers although possessing so many obvious advantages have not come into more general use has been simply that they have been badly constructed. None of the trailers with which truck owners have previously experimented have been able to stand up to bad roads even although many of them have been unnecessarily strongly and heavily built.



A proof showing the flexibility of ANSIO.

Several years ago we were able to locate the cardinal defects in the construction of the old-fashioned trailers and after a long series of costly experiments and road tests have been able to produce a trailer which has proved to satisfy all requirements even under the worst conditions. Good evidence of this is shown by the testimonial printed on the next page, which we have received from one of the largest industrial concerns in Finland.

The ANSIO is simple.

The superiority of the ANSIO over other trailers is due to the fact that it is completely articulated so that all the members subjected to bending stresses are either jointed or scientifically strengthened.



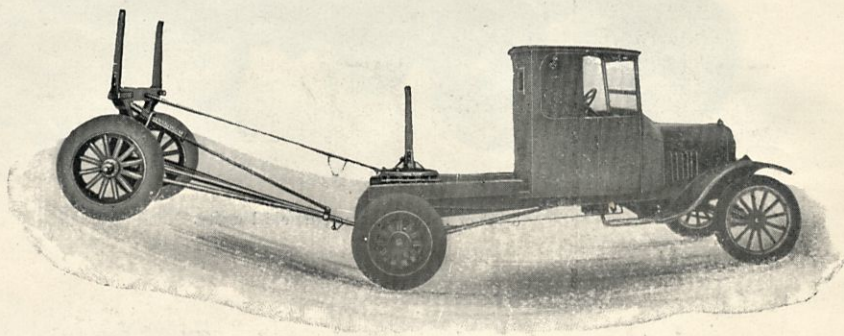
A Truck with ANSIO-Trailer can be manoeuvred even in a narrow Timber yard.

The ANSIO is light.

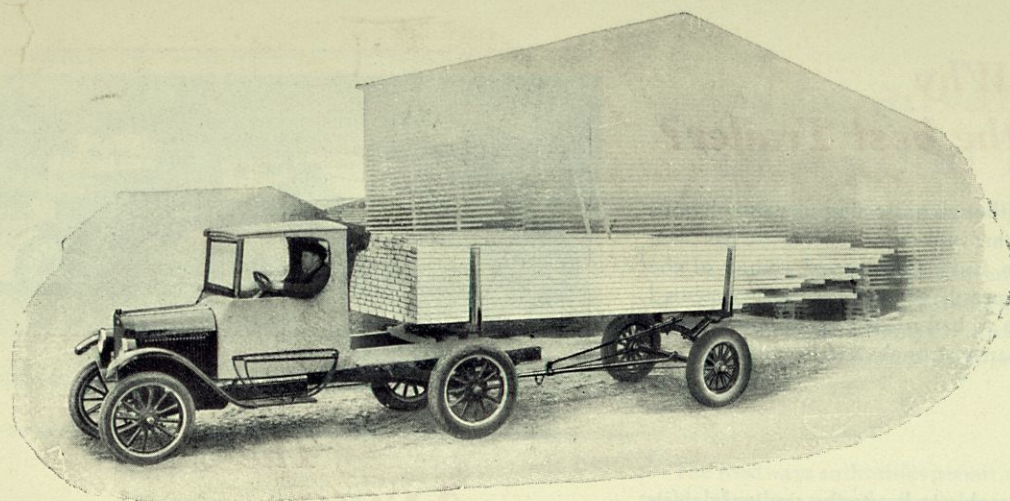
Owing to its scientific articulation and design the ANSIO is light and of extraordinary strength. The trailer only weighs about 660 lbs, which in itself is a great advantage as the load carried can be correspondingly increased. Owing to its lightness the trailer is very easy to handle and maneuver even when disconnected from the truck.

The ANSIO is strong.

ANSIO is constructed with such a large margin of safety that many owners habitually subject the trailers to from 100% to 200% overload. We know of cases where one ton trucks are continually used with loads of 2 or 3 tons without injury either to the truck or trailer.



An ordinary truck with trailer would easily break on account of the unevenness of the road.

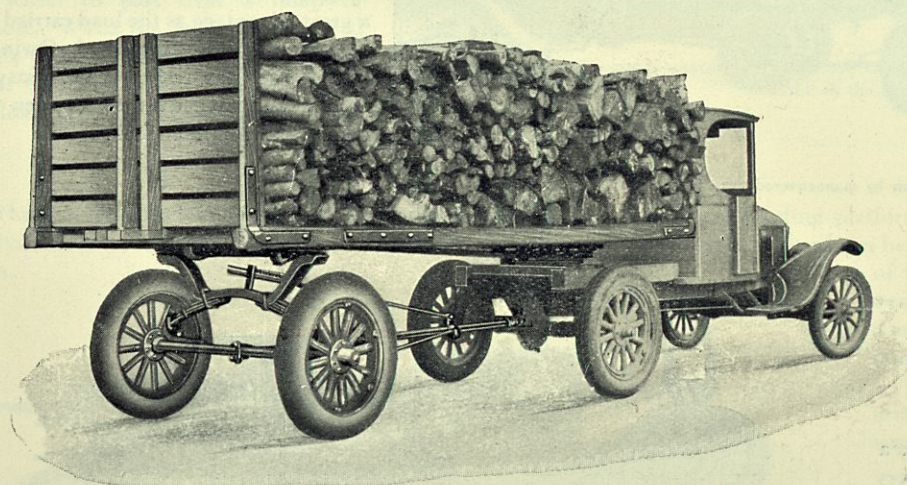


A standard of timber, see testimonial page 6.

ANSIO holds the track.

Even when going round the sharpest corners the wheels of the ANSIO trailer follow exactly in the wheel tracks of the driving truck.

ANSIO models B, C and D are provided with a patent automatic steering arrangement, which holds the trailer wheels in the track without any attention from the chauffeur. For this reason the ANSIO is the only trailer which can be backed even in the narrowest roads.

8 m³ of firewood, see testimonial under.

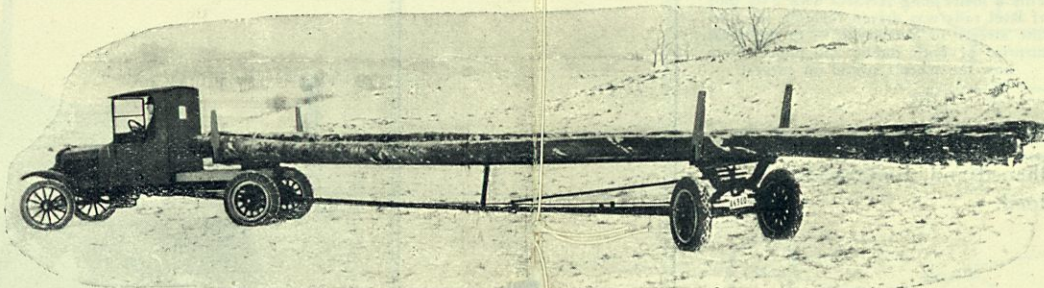
Increased transport and reduced costs. The ANSIO pays for itself in an incredibly short time.

The ANSIO fits all trucks and can be used for all classes of goods.

The ANSIO trailer can be used with all makes of trucks as we supply it ready to be coupled to the truck specified by the purchaser. The mounting of the swivel plate requires no special skill or knowledge. Two men can change the body on an ordinary truck for the trailer and vice versa within 5 minutes.

It is a simple and speedy job to adapt the body or platform to suit the goods to be transported so that the trailer can be used for varying classes of goods during the same day.

We manufacture bodies and platforms to suit customers' requirements.



During tests in Stockholm: — Loaded with telegraph poles 15 metres and driving round a circle 5 metres diameter.

Read the following testimonial from W. Gutzeit & Co.

Replying to Messrs. J. Hallenbergs request for our criticism of their ANSIO trailers of which we have had 6 in use with FORD trucks during the whole of last summer transporting pulpwood and firewood I have pleasure in stating as follows: —

The load carried on the truck with trailer amounted to 7 — 8 m³ of pulpwood and firewood as against a maximum load of 3 — 4 m³ on the truck without trailer (we have also had 8 FORD trucks in use without trailers)

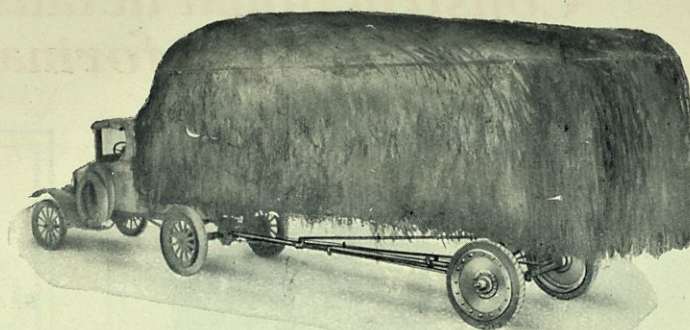
On comparison of the transport costs with and without trailers it has been proved that the trailer pays for itself within 2½ months.

The wear on the tyres on the trucks with trailers has not been noticeably greater than on the truck without trailer.

The trailers owing to their construction and especially owing to the patented steering arrangement have shown themselves to be eminently suitable for the work and thoroughly reliable.

Viborg, 12th November 1925.

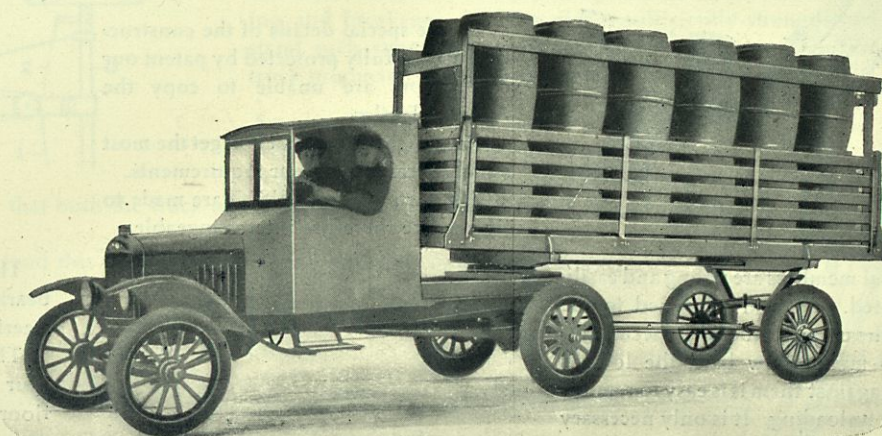
AATTO KOKKOLA.



A good load of hay.

ANSIO can be lengthened and shortened.

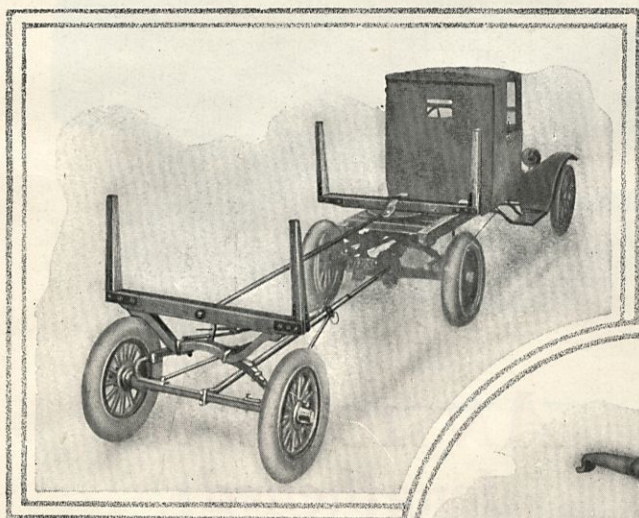
The drawbars on the ANSIO are so constructed that the trailer can be lengthened or shortened in a few minutes to suit the load. This is achieved by making the bars of telescopic steel tubes. By opening a couple of locks, models A and B can be lengthened from 2½ to 4 metres, model C from 3½ to 6 metres and model D from 5 to 8 metres. The trailer can be completely uncoupled from the truck just as easily and quickly.



High sided crate body suitable for barrels, boxes, cattle etc.

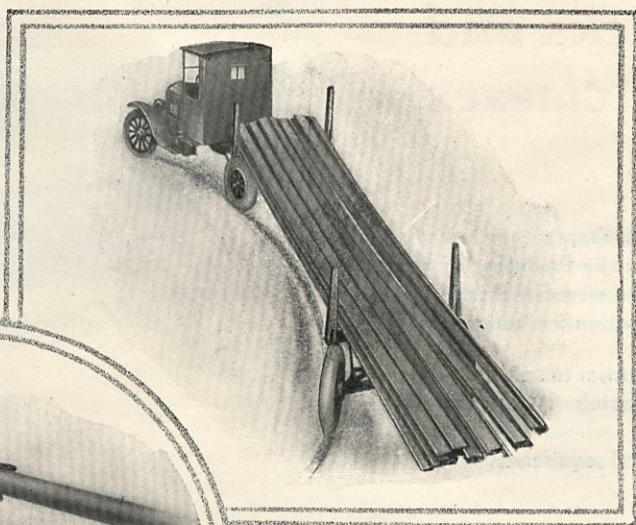
ANSIO cuts your expenses, and what is often much more important saves your time.

Constructional details a guarantee of performance.

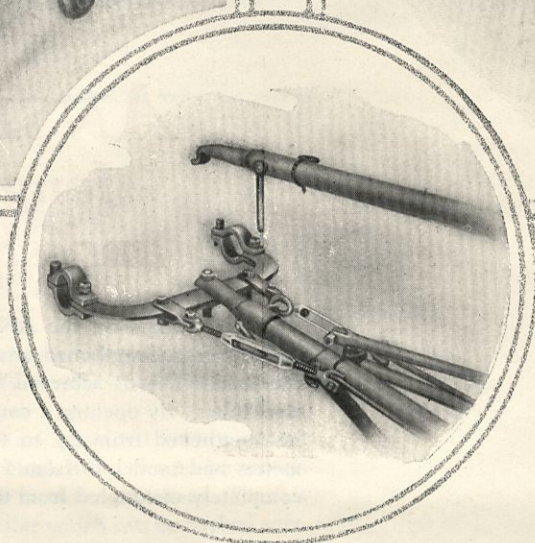


Model A. without automatic steering is the cheapest and most popular model. Note how solidly it is constructed and reinforced.

Each trailer is provided with a draw bracket to fit the truck specified by customer. The bracket is fixed by two bolts to the back axle housing.

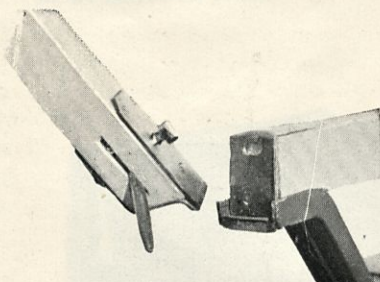


This 8 metre long ANSIO with 2 1/2 tons of steel rails was driven through the narrow streets of Stockholm — to the great surprise of both public and police. Note how the wheels swivel on curves.



Draw bracket and coupling arrangement on ANSIO models B, C, & D.

Drawbars can be easily lengthened and shortened to suit the load.

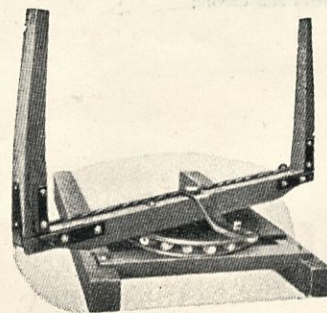


Vertical members are strong and easily dismounted. They are fastened to the ends of the crossmembers by special hinges. No matter how hard the load is pressing against them it is easy to remove them for unloading. It is only necessary to pull out the pin.

As the special details of the construction are all fully protected by patent our competitors are unable to copy the ANSIO Trailer.

Be sure therefore that you get the most suitable trailer for your requirements.

All parts of the ANSIO are made to jig and are therefore interchangeable.



The turntable moves easily on a roller bearing so that there is no wear and the steering is light.

The forward turntable is fixed with four bolts either to the chassis or the floor of the truck body. See illustration on pages 2 & 3.

Net Economy 44 %

It affords us great pleasure to reply to your enquiry about the trailers purchased from you on the 22 April 1925 as we have been very pleased with same. We have used the trailer for planks and timber for which they have turned out to be extremely suitable and leave nothing to be desired.

However, when we saw your latest models with all the remarkable improvements which you have introduced it was obvious that you have produced a trailer incomparably superior to any other trailer on the market.

We have been able to make a thorough investigation of the economical side of the question as freight costs with truck and trailer have been Fmk 112.30 cheaper per standard than with horse haulage which costs Fmk 250: —.

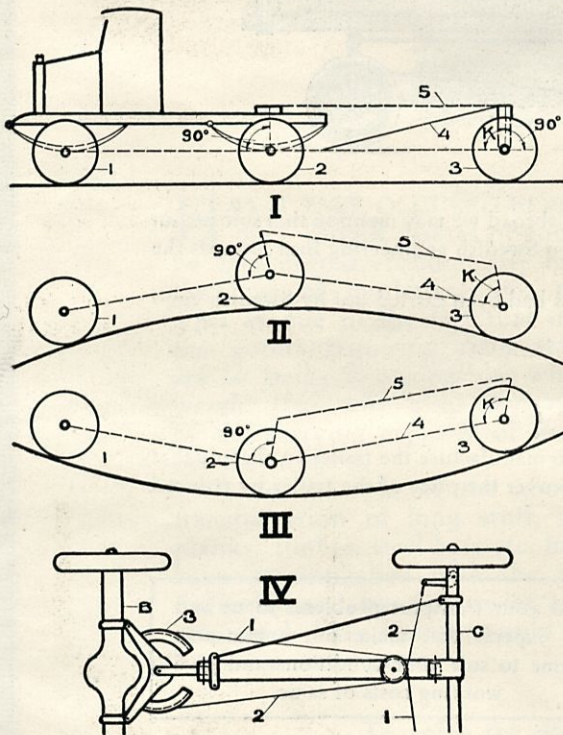
The haulage distance was 16 km of very hilly road. For a return journey with a load of 0,7 standard the costs have been as follows: — Gasoline Fmk 26.59. Depreciation Fmk 44.80. Wages (chauffeur and labourer) Fmk 25: — Total costs Fmk 99.39. Freight costs per standard therefore work out at Fmk 137.70.

Yours faithfully, SOKKALAN SAW MILL.

**Automatic
steering and frame jointing
are the most important patented features
of the ANSIO trailer.**

Technical description of the steering arrangement.

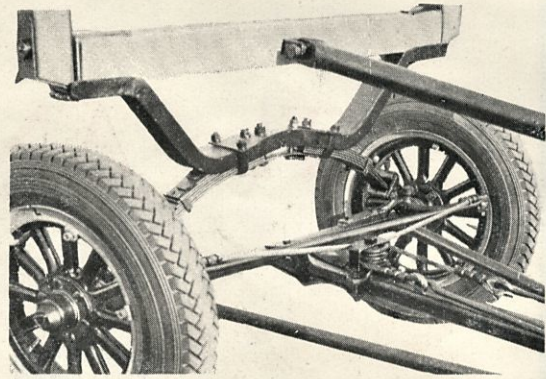
The steering arrangement is the essence of simplicity. In figure IV, B is the truck backaxle and C the trailer axle. Quadrant 3 is fixed to the backaxle of the truck. When going round a corner, axle B moves at an angle to axle C and there is therefore a corresponding movement of the quadrant. To the ends of the quadrant are fixed two steel cords 1 & 2 which make a quarter turn round the guide pulley and connect with the respective steering arms on the trailer wheels which operate in the same way as the front wheels on the truck.



the trailer axle, but are jointed so that both the truck and trailer are free to move up and down without producing the least bending effect.

If only one drawbar were used (and this has been tried) it is impossible to apply the tractive effort at the right spot v. i. z. the axle.

The automatic steering can be arranged to follow the track of either the trucks front or back wheels as may be desired by the chauffeur. The trailer can be backed even on corners.



ANSIO trailer axle spring and steering system.

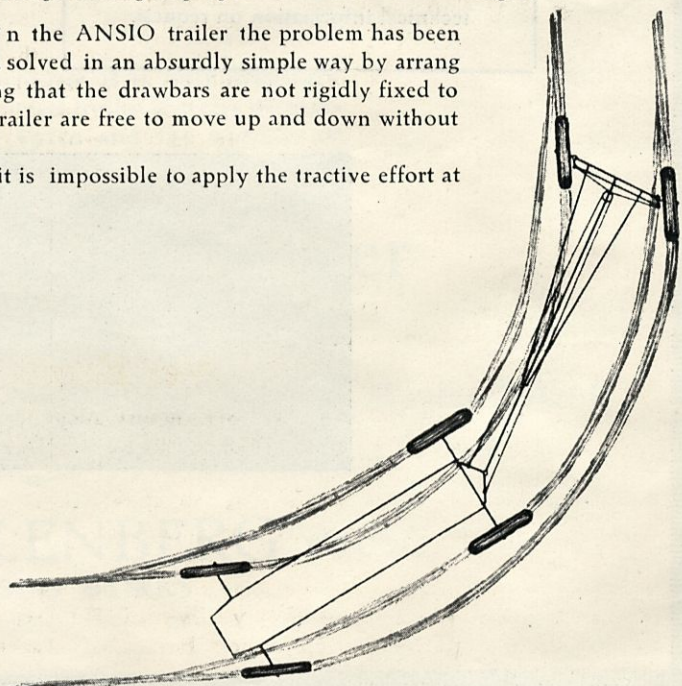
Flexibility.

In the accompanying diagrams giving a side view of a truck with trailer 1 & 2 represent the front and back wheels of the truck and 3 represents the trailer wheel. In the same figure 4 & 5 show the lower and upper drawbars, while 6 shows the position of the strut used to hold the trailer up when uncoupled from the truck. Figure 1 shows the truck on a flat road. Figure 2 shows what happens on the crown of a hill, and Figure 3 the position on a concave depression

On all other trailers but ANSIO the drawbar or drawbars 4 & 5 are fixed rigidly to the trailer axle and generally at 90° to the axle as shown in Figure 1 where K represents the angle. So long as the car is on an absolutely flat road everything is all right, and this method of attachment is as good as any other. If, however, we consider Fig. II and the positions taken up by the drawbars etc. under such conditions it is obvious that the angle K must be acute.

Fig. III shows that under other circumstances K must be an obtuse angle. If, as on ordinary trailers, the drawbars are rigidly fixed to the trailer axle, severe stresses are produced which finally lead to bending and breakage. If the trailer is sufficiently strengthened to withstand such stresses the only result is that they are transferred to the truck producing disproportionate wear and breakages.

In the ANSIO trailer the problem has been solved in an absurdly simple way by arranging that the drawbars are not rigidly fixed to

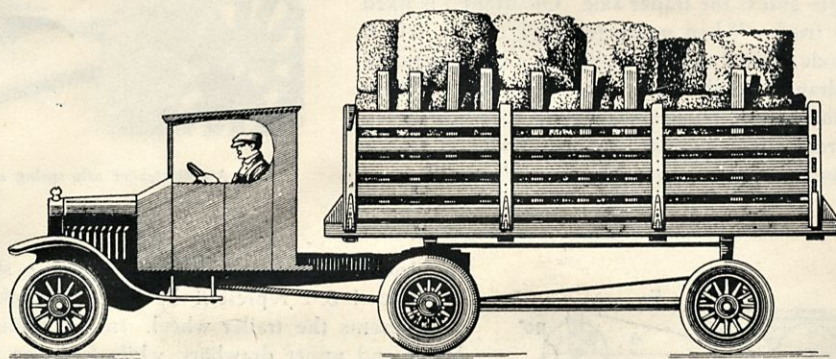


J. HALLENBERG



TAMMISUO WORKS

The ANSIO abroad



As proof of the favourable attention created by ANSIO abroad we may mention that sole manufacturing rights for Sweden were purchased by a well known Swedish engineering firm towards the end of 1925.

The contract was signed only after most exhaustive tests had been carried out by Swedish engineers and transport specialists.

ANSIO is cheap

Owing to mass production methods we have been able to manufacture the trailer so cheaply that it only takes a very short time for the truck owner to recover the price of the trailer by reduced transport costs.

Prices and
technical information on request.

Send your transport problems to us and
our experts will make out a transport
scheme to suit your conditions and give
working costs of same.

